

Application No. 10/716,899
Response to Office Action

Customer No. 01933

Listing of Claims:

1. (Currently Amended) An ink jet recording head maintenance apparatus for an ink jet recording head which includes a nozzle face having a plurality of nozzles that eject ink as drops, said maintenance apparatus comprising:

5 a plurality of individual wiping members, each of which is individually selectable to wipe the nozzle face independently,
~~which have a nozzle face formed with nozzles, and wipe the nozzle face of the ink jet recording head for ejecting ink in a form of drops of ink from the nozzles,~~ and at least one of which differs
10 ~~in a~~ is formed to apply a different wiping force to be applied to the nozzle face than another of the wiping members;

a wiping member selecting means mechanism for selecting
~~the optimum one of the individual wiping members; member for~~
~~wiping the nozzle face [[,]] from among the plurality of wiping~~
15 ~~members;~~ and

a wiping mechanism for wiping the nozzle face by with the optimum selected individual wiping member ~~selected by the wiping member selecting means.~~

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2. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 1, wherein the wiping mechanism includes:

a wipe support member supporting the plurality of wiping members;

a moving mechanism ~~supporting which movably supports~~ the wipe support member to be movable along the nozzle face; ~~[[,]]~~ and ~~moving the wipe support member thus supported, along the nozzle face; and~~

a positioning mechanism for positioning the optimum selected individual wiping member ~~selected by the wiping member selecting means,~~ in a contact position in which the optimum selected individual wiping member comes into contact with the nozzle face ~~in such a state that while~~ the wipe support member is being moved along the nozzle face by the moving mechanism.

3. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 2, wherein the positioning mechanism includes:

a wiping member moving mechanism for moving the optimum selected individual wiping member to a predetermined pressing position; and

a pressing mechanism for pressing, toward the contact position, the optimum selected individual wiping member moved to

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10 ~~at the predetermined pressing position, by the wiping member
moving mechanism.~~

Claim 4 (Canceled).

5 5. (Currently Amended) An ink jet recording head
maintenance apparatus according to claim 2, wherein each of the
plurality of individual wiping members have, ~~at their tip,~~
comprises at a tip thereof an edge portion extending along a
direction intersecting ~~the~~ a direction of movement; and
wherein the positioning mechanism positions the optimum
selected individual wiping member in the contact position so that
the edge portion of the optimum selected individual wiping member
~~will come into contact~~ contacts with the nozzle face while the
10 wipe support member is moved along the nozzle face.

5 6. (Currently Amended) An ink jet recording head
maintenance apparatus according to claim 5, wherein the plurality
of wiping members are formed of an elastic material; and
wherein the positioning mechanism positions the optimum
selected individual wiping member in the contact position so that
~~its the~~ the edge portion ~~may be thereof~~ is pressed against the nozzle
face by the elastic force of the optimum selected individual
wiping member.

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7. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 1, wherein each of the ~~plurality of individual~~ wiping members are is so formed as to be apply a different ~~in the~~ wiping force against the nozzle face.

8. (Original) An ink jet recording head maintenance apparatus according to claim 1, wherein the plurality of wiping members are formed of an elastic material.

9. (Original) An ink jet recording head maintenance apparatus according to claim 1, wherein the plurality of wiping members are formed of a porous material.

10. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 2, wherein the plurality of wiping members are ~~removably formed in relation to~~ removable from the wipe support member.

11. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 2, wherein the wipe support member ~~are removably formed in relation to~~ is removable from the moving mechanism.

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12. (Currently Amended) An ink jet recording head maintenance apparatus according to claim 1, wherein the wiping member selecting ~~means~~ mechanism selects said one of the optimum individual wiping member members in accordance with an elapsed time after the execution of a preceding wiping operation.

13. (Currently Amended) An ink jet recording head maintenance apparatus ~~according to claim 1,~~ for an ink jet recording head which includes a nozzle face having a plurality of nozzles that eject ink as drops, said maintenance apparatus comprising:

a plurality of wiping members for wiping the nozzle face of the ink jet recording head, at least one of which is formed to apply a different a wiping force to the nozzle face than another of the wiping members;

a wiping member selecting mechanism for selecting one of the wiping members for wiping the nozzle face; and

a wiping mechanism for wiping the nozzle face with the selected wiping member;

wherein the wiping member selecting ~~means~~ mechanism selects the ~~optimum~~ one of the wiping member ~~members~~ in accordance with an environmental history after the execution of the a preceding wiping operation.

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14. (Currently Amended) An ink jet recording head maintenance apparatus ~~according to claim 1,~~ for an ink jet recording head which includes a nozzle face having a plurality of nozzles that eject ink as drops, said maintenance

5 apparatus comprising:

a plurality of wiping members for wiping the nozzle face of the ink jet recording head, at least one of which is formed to apply a different a wiping force to the nozzle face than another of the wiping members;

10 a wiping member selecting mechanism for selecting one of the wiping members for wiping the nozzle face; and

a wiping mechanism for wiping the nozzle face with the selected wiping member;

15 wherein the wiping member selecting means mechanism selects the ~~optimum~~ one of the wiping member members in accordance with the ~~a number of counts~~ of printed sheets printed after the execution of the ~~a~~ preceding wiping operation.

15. (Currently Amended) An ink jet recording apparatus, comprising:

a conveying mechanism for conveying a recording medium;

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5 ~~an the ink jet recording head, which ejects having a nozzle~~
~~face formed with nozzles, and ejecting ink from the nozzles to~~
the recording medium being conveyed by the conveying mechanism;
a control section for ~~driving to control~~ controlling the
conveying mechanism and the ink jet recording head in accordance
with a printing data; and
10 the ink jet recording head maintenance apparatus according
to claim 1.

16. (Currently Amended) An ink jet recording apparatus,
comprising:

a conveying mechanism for conveying a recording medium;
5 ~~an the ink jet recording head, which ejects having a nozzle~~
~~face formed with nozzles, and ejecting ink from the nozzles to~~
the recording medium being conveyed by the conveying mechanism;
a control section for ~~driving to control~~ controlling the
conveying mechanism and the ink jet recording head in accordance
with a printing data; and
10 an ink jet recording head maintenance apparatus according to
claim 2.

17. (Currently Amended) An ink jet recording apparatus,
comprising:

a conveying mechanism for conveying a recording medium;

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5 ~~an the ink jet recording head, which ejects having a nozzle~~
~~face formed with nozzles, and ejecting ink from the nozzles to~~
the recording medium being conveyed by the conveying mechanism;

a control section for ~~driving to control~~ controlling the
conveying mechanism and the ink jet recording head in accordance
with a printing data; and

10 an ink jet recording head maintenance apparatus according to
claim 3.

Claim 18 (Canceled).

19. (Currently Amended) An ink jet recording apparatus,
comprising:

a conveying mechanism for conveying a recording medium;

5 ~~an ink jet recording head, which ejects having a nozzle face~~
~~formed with nozzles, and ejecting ink from the nozzles to the~~
recording medium being conveyed by the conveying mechanism;

a control section for ~~driving to control~~ controlling the
conveying mechanism and the ink jet recording head in accordance
with a printing data; and

10 an ink jet recording head maintenance apparatus according to
claim 5.

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20. (Currently Amended) An ink jet recording apparatus,
comprising:

a conveying mechanism for conveying a recording medium;

an the ink jet recording head, which ejects ~~having a nozzle~~
5 ~~face formed with nozzles, and ejecting~~ ink from the nozzles to
the recording medium being conveyed by the conveying mechanism;

a control section for ~~driving to control~~ controlling the
conveying mechanism and the ink jet recording head in accordance
with a printing data; and

10 an ink jet recording head maintenance apparatus according to
claim 6.